PageZero, PageOne, FillRepot and DataSummary

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This document describes the plots and fields presented on the *PageZero, PageOne, FillReport* and *DataSummary* pages and gives references to the sources of the data represented by them. These monitoring tools have been developed and are maintained by Web Based Monitorin (WBM) team. For any questions please contact WBM core team by email (*wbm-core@cern.ch*);

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1 General Concept

The idea behind the tools developed by WBM group is to give prompt visual picture of the important measurements that are done by enormous amount of gadgets and detectors. High energy experiment of XXI century, such as CMS, is very complicated and needs to be monitored very closely. CMS and LHC are constantly monitored by different gadgets and the collissions itself have many aspects to them which needs to be looked at and analysed. This data is recorded and stored in databases. WBM maintains big part of those databases and develops web based tools to visually monitor data stored.

1.1 Presenting

The web page that gives you the information is constructed by a java servlet, which securely provides the information to users without them directly accessing the database. Each enquiry usually fetches a big amount of data, so the carefully made query is necessary to minimize the load and time needed for the iteration.

1.2 Creating

To keep database secure and minimize number of queries, servlet usualy presents information on webpage by parsing the XLM information or showing images of plots which have been pre-made on the server side. The plots are usually stored on the servers (e.g. FillReport plots), while the information that could be quickly and efficiently fetched from database is generated on the fly and then passed to the client's browser.

2 PageZero

Code: PageZero.java
https://cmswbm.web.cern.ch/cmswbm/cmsdb/servlet/PageZero
PageZero is a CMS private page, which provides detailed information about current status of CMS detectror and LHC. Information is organized into the several tables. The information on the page is updated every 10 minutes on the server side. The last update time is provided on top of the page in UTC time. So is the current UTC time and time of the computer the page is accessed from.

2.1 DCS Status

Detector Control Systems (DCS) Status table provides information about the status of CMS subdetectors in Red and Green colors. Red indicates that high voltage is not supplied to this subdetector or some of its parts, green color shows that this sudetector is completely ON.

Information Source : Database

Schema	Table
CMS_WBM	T_DSC_STATUS

2.2 LHC

This table provides the details of LHC status. The information is gathered from the LHC GMT server by parsing the XML.

Information Source : http://cms-lhcgmt.cms:51007

2.3 Magnet

This table proviedes information about CMS solenoid, temperature and vacuum.

2.4 CMS DAQ/Trigger

2.5 Xing Angle / Number of Bunches

2.6 Luminosity

2.7 Sub-system DAQ Status

3 PageOne

3.1 Datataking History for last 24 Hours

3.2 DCS Status

3.3 Information about Run, Triggers and DAQ

3.4 Comments from CMS and LHC

4 FillRepot

5 DataSummary

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